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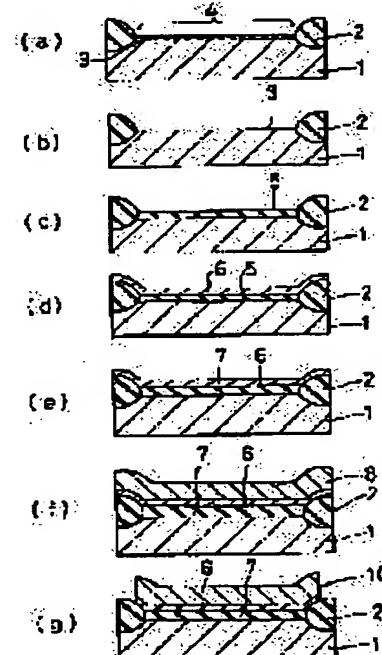
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**(54) SEMICONDUCTOR AND FORMING OXIDE FILM ON SURFACE OF SEMICONDUCTOR SUBSTRATE**

**(57)Abstract:**

**PROBLEM TO BE SOLVED:** To form a high-quality oxide film at a high controllability, without using the high temp. heating and form a gate oxide film after metal wiring by forming the oxide film comprising a metal film having the oxidizing catalytic function on the oxide film.

**SOLUTION:** A semiconductor substrate 1 has an oxide film 7 and thin metal film 6 in this order on the surface. The film 6 is a metal of 0.5–30nm thick, having an oxidizing catalytic function. The film 7 is a film of 1–20nm thick, comprising a metal film of 1–20nm thick, having an oxidizing catalytic function. After, e.g. removing a natural oxide film 9 on a Si substrate 1, it is dipped in hot nitric acid to form a first oxide film 5 of 1.1nm thick, a Pt 6 of about 3nm thick is vapor-evaporated and heated at 300°C in a moist O atmosphere to grow a silicon oxide film of 4.5nm thick, and Al 8 is deposited and patterned to form gate electrodes 10.



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